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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,318	02/25/2004	Scott Wakefield	2004P02544US (00355P0125U)	2635
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Elsa Keller SIEMENS CORPORATION Intellectual Property Dept. 170 Wood Avenue South Iselin, NJ 08830			EXAMINER THOMAS, LUCY M	
			ART UNIT 2836	PAPER NUMBER
DATE MAILED: 02/09/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

EK

Office Action Summary	Application No. 10/786,318	Applicant(s) WAKEFIELD ET AL.	
	Examiner Lucy Thomas	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

Recitation of "Fig. 5" on page 10, line 3 should be corrected to "Fig. 4."

Recitation of "(L2, L2, L3)" on page 6, line 19 should be corrected to "(L1, L2, L3)."

The reference character 52 has been used to designate both the "coil" and "firing angle." Appropriate correction is required.

Claim Objections

2. Claim 7 is objected to as it does not further limit Claim 1 from which it depends. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 7-11, and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (US 6,038,114). Regarding Claim 1, Johnson discloses a motor controller system comprising: power switches S1, S2, S3 for connection to an AC line for controlling application of AC power to the motor 16; a fault contactor having contacts 17; a motor wiring circuit (see circuit in Figure 4) for operatively connecting the power switches and fault contactor contacts with

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motor winding terminals; voltage sensors (see 18 in Figure 4) for sensing AC line voltage and motor winding terminal voltage, and a control circuit 20 (see Figure 4) for controlling operation of the switches and fault contactor, including de-energizing the fault contactor in an off mode where AC power is not supplied to the motor winding terminals, the control circuit measuring AC line voltage and motor winding terminal voltage in the off mode and detecting an error condition responsive to sensed AC line voltage being substantially different from motor winding terminal voltage in the off mode (Figures 4-6, 9, Column 1, lines 6-9, 24-42, 57-67, Column 2, lines 40-64, Column 3, lines 5-39, Column 4, lines 29-67).

Regarding Claim 2, Johnson discloses the voltage sensors sense AC line to neutral voltage and motor winding terminal to neutral voltage (Figure 6, Column 5, lines 57-66). Regarding Claim 3, Johnson discloses the motor controller system, wherein the voltage sensors sense voltage for each winding of the motor and each phase of the AC line (see Figure 6, Column 5, lines 20-42). Regarding Claim 4, Johnson discloses the motor controller, wherein the motor wiring circuit electrically connects the power switches and fault contactor contacts in a delta configuration with the motor windings (see Figure 2). Claim 7 only recites that the control circuit detects the error condition responsive to sensed AC line voltage having substantially different voltage level from motor winding terminal voltage level in the off mode, which is already recited in Claim 1.

Claims 8-11 and 14 basically recite Claims 1-4, and 7, except that a motor starter system and solid-state switches are claimed instead of a motor controller system and power switches. Johnson discloses the power switches,

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which are solid-state switches (see S1, S2, S3 in Figure 2), and the motor controller system and motor starter system are interchangeable as acknowledged by the Applicant (see Specification, Page 5, lines 12-13).

Furthermore, the system of Johnson may be considered motor starter system.

The recited steps of the method Claims 15-16 would necessarily be performed when using motor starter/controller system disclosed in Claims 8-11 and 14. Therefore, please see the rejection for Claims 8-11 and 14 above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6, 13, and 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (US 6,038,114). Regarding Claims 6 and 13, Johnson does not disclose the motor controller/starter system, wherein the motor wiring circuit electrically connects the power switches and fault contactor contacts in line with the motor windings. It would have been obvious to those skilled in art at the time the invention was made to alternatively provide Johnson's motor wiring circuit, which is of delta configuration, with the fault contactor contacts in line with the motor windings (Y-configuration), as these configurations are art recognized equivalents. The recited step of the method Claim 18 would necessarily be performed when using motor starter/controller

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system disclosed in Claims 6 and 13. Therefore, please see the rejection for Claims 6 and 13 above.

7. Claims 5, 12, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (US 6,038,114) in view of Kim et al. (US 5,684,377). Regarding Claims 5 and 12, Johnson does not disclose that the control circuit detects an error condition responsive to sensed AC line voltage having a different phase relationship from motor winding terminal voltage in the off mode. Kim discloses motor controller/starter system 10, wherein the voltage sensors 200, 300, 600 sense voltage for each winding of the motor and each phase of AC line (Column 2, lines 23-47). Kim's phase detector uses the different phase measurements to control the firing angle. It would have been obvious to those skilled in art at the time the invention was made to modify Johnson's motor controller to include a phase detector to determine the different phase relationship between measured voltages as taught by Kim to increase the accuracy of fault detection and safety of systems using the motor controller/starter.

The recited steps of the method Claims 17 and 19 would necessarily be performed when using the motor controller/starter disclosed in Claims 5 and 12. Therefore, please see the rejection for Claims 5 and 12.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4,545,464, US 5,153,489, US 4,681,190, US 6,201,369, US 5,341,080.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy Thomas whose telephone number is 571-272-6002. The examiner can normally be reached on Monday - Friday 8:00 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LT
December 05, 2005



PHUONG T. VU
PRIMARY EXAMINER